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PTO/SB/97 (06-09)

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Serial No.: 10/516,984

Docket No.: PF020062

Examiner: Luong Trung Nguyen

Transmittal Form (2 Copies - 2 Pages)

Response to Restriction Requirement (4 Pages)

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TRANSMITTAL
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Total Number of Pages in This Submission

Application Number	10/416,984
Filing Date	December 6, 2004
First Named Inventor	Petrus Gisbertus Maria Centen
Art Unit	2622
Examiner Name	Luong Trung Nguyen
Attorney Docket Number	PF020082

ENCLOSURES (Check all that apply)

<input type="checkbox"/> Fee Transmittal Form	<input type="checkbox"/> Drawing(s)	<input type="checkbox"/> After Allowance Communication to TC
<input type="checkbox"/> Fee Attached	<input type="checkbox"/> Licensing-related Papers	<input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences
<input checked="" type="checkbox"/> Amendment/Reply	<input type="checkbox"/> Petition	<input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)
<input type="checkbox"/> After Final	<input type="checkbox"/> Petition to Convert to a Provisional Application	<input type="checkbox"/> Proprietary Information
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Remarks		

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name	Thomson Licensing		
Signature			
Printed name	Patricia A. Verlangieri		
Date	July 7, 2008	Reg. No.	42,201

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**TRANSMITTAL
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Total Number of Pages in This Submission

Application Number	10/416,964
Filing Date	December 6, 2004
First Named Inventor	Petrus Gisbertus Maria Centen
Art Unit	2622
Examiner Name	Luong Trung Nguyen
Attorney Docket Number	PF020062

ENCLOSURES (Check all that apply)		
<input type="checkbox"/> Fee Transmittal Form <input type="checkbox"/> Fee Attached	<input type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation <input type="checkbox"/> Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s) _____ <input type="checkbox"/> Landscape Table on CD	<input type="checkbox"/> After Allowance Communication to TC <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input type="checkbox"/> Other Enclosure(s) (please identify below):
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SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name	Thomson Licensing		
Signature			
Printed name	Patricia A. Verlangieri		
Date	July 7, 2008	Reg. No.	42,201

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Serial No. 10/516,984

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PF020062

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

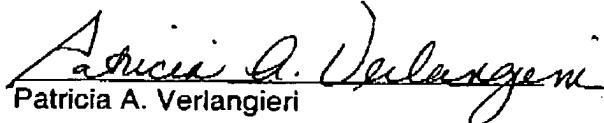
Patent Application

Inventors : Petrus Gijsbertus Maria Centen
Serial No. : 10/516,984
Filed : December 6, 2004
Title : MULTI-FORMAT CAMERA HEAD
Examiner : Luong Trung Nguyen
Art Unit : 2622

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Patricia A. Verlangieri

RESPONSE TO RESTRICTION REQUIREMENT

Restriction to one of the following species is required under PCT Rule 13.1:

Species I: Figure 1.

Species II: Figure 6.

Species III: Figure 7.

The invention is clearly directed towards combining two different integer multiples of physical lines of a CCD or CMOS imager for providing a vertical resolution corresponding to the NTSC and PAL (or SECAM) television standards.

Serial No. 10/516,984

PF020062

According to the NTSC television standard the vertical resolution is 480 lines, and according to the PAL standard the vertical resolution is 575 lines. As discussed in great detail in the specification beginning in line 5 of page 3, the least common multiple of 480 and 575 is 55,200. At the time of the invention there was no commercially available CCD or CMOS image sensor having this vertical resolution. However, the inventors noticed that the least common multiple of 480 and 576 is only 2880, and the ratio of 480 to 576 is exactly 5 to 6. So, using an imager having 2880 lines, a combination of six consecutive lines could be used for producing one line of an image complying with the NTSC standard. Five consecutive lines could be used for producing one line of an image complying with the PAL standard, if one line is discarded. This would allow for using all the lines of the same imager for producing images compliant with either of the standards simply by changing the number of lines that are combined. The error in the imager's field of view introduced to the PAL image when the zoom is not adjusted is smaller than 0.2% and is negligible.

Applicant respectfully disagrees with the examiner that the application contains claims directed to more than one species of the generic invention. Rather, the generic invention of claim 1 is applicable for different types of CCD or CMOS imagers, notably CCD imagers of the frame-transfer type, CCD imagers of the interline-transfer type, and CMOS imagers, which form embodiments claimed in the dependent claims.

Species I identified by the examiner relates to a frame transfer CCD imager shown in figure 1. In this type of CCD imagers the light-sensitive pixels are grouped in element 2, and light insensitive charge storage areas for each light-sensitive pixel are grouped in element 3. It is common knowledge of the person of ordinary skill in the art that the light-sensitive pixels of element 2 are exposed to impinging light and, after the desired exposure time is over, the charges accumulated in the light-sensitive pixels are moved to light insensitive storage regions, from which they are ultimately read out.

Serial No. 10/516,984

PF020062

Species II identified by the examiner relates to a frame transfer CCD imager as shown in figure 6. In this type of CCD imagers the light-sensitive pixels are grouped in element 2. In contrast to the CCD imager shown in figure 1 this embodiment of a CCD imager does not provide charge storage areas for each light-sensitive pixel. Rather, the number of charge storage areas corresponds to the maximum resolution of a video image that is to be output. In this case, the charge storage areas would correspond to the PAL resolution, which has 575 vertical lines. During readout of the CCD imager for obtaining images according to the PAL standard, during transfer of the charges accumulated in the light-sensitive pixels during exposure to the light insensitive storage area, charges of pixels from 5 consecutive lines are combined into one charge, which is then stored in one line of the charge storage area. In the case of reading out the CCD imager for obtaining images according to the NTSC standard, and during transfer of the charges accumulated in the light-sensitive pixels during exposure to the light insensitive storage area, charges of pixels from 6 consecutive lines are combined into one charge, which is then stored in one line of the charge storage area. The charges transferred to the light insensitive storage area then read out for producing a video signal. This particular embodiment reduces the number of charge storage elements at the cost of flexibility for producing images having different resolutions.

Species III identified by the examiner relates to an interline transfer CCD sensor as shown in figure 7. In this type of CCD sensor light insensitive charge storage areas are provided next to the light-sensitive elements in the form of vertical columns. After exposure the charges are transferred into the vertical columns, from which they are shifted one after another to a horizontal readout register. However, this type of CCD sensor also allows for combining charges during transfer of the charges in the vertical columns.

In view of the discussion above it is submitted that the type of CCD image sensor is irrelevant to the finding of the invention that instead of using 575

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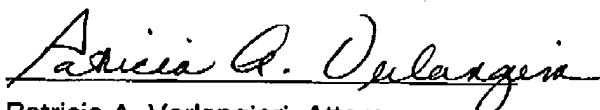
Serial No. 10/516,984

PF020062

vertical lines for the PAL standard 576 lines may be used, because it is irrelevant where the combination of the charges is effected.

As it seems necessary to make an election, in response to the restriction requirement, we hereby elect Species I, with claims 1-15, with traverse.

Respectfully submitted,



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July 7, 2008